Boards, Memberships, Committees, etc.

Dr. James W. Mar's most recent research activities were in the fields of the advanced filamentary composite materials and large structures in space. Within the Department of Aeronautics and Astronautics, he was Head of the Division of Structures, Materials and Aeroelasticity. He was the founder and Director of the Technology Laboratory for Advanced Composites (TELAC). He was also Director of the Space Systems Laboratory (SSL) which he and Professor Miller started. He was instrumental in creating the Unified Engineering subjects which now serve as the foundation of the undergraduate education in Aeronautics and Astronautics at M.I.T. Other subjects which he developed deal with the theory of shells, the design of aerospace structures for longevity and the design technology of the filamentary composite materials. His normal teaching included subjects in the fields of solid mechanics, the theory of elasticity, dynamics, structural dynamics, aeroelasticity, aerodynamic heating and design.

Currently he is a member and chairman emeritus of TOGAA, *Technical Oversight Group re Aging Aircraft*, which reports to FAA Headquarters. TOGAA meets several times each year and addresses structural issues of transport category aircraft, commuter aircraft, jet engines, propellers and rotorcraft. He is currently also a member of the NASA Technology and Commercialization Advisory Committee, and a member of the NASA Space Transportation Subcommittee of the Aeronautics and Space Transportation Advisory Committee. He was a member of the Boeing Corporate Technology Advisory Council. Other recent ad hoc committee assignments are chairman of the Independent Risk Assessment Team on the V-22, chairman of the Executive Independent Review Team on the C-17, a member of the USAF F-22 Executive Advisory Group, a member of the USAF SAB C-141 Service Life Extension Program Review, USAF SAB *Study on Air Force Aircraft Jet Engine Manufacturing and Production Processes,* chairman of an Air Force Studies Board *Study on Technology to Enhance Logistics Performance of Fielded Weapon and Support Systems,* a member of a National Research Council Study Committee on *Air Passenger Service and Safety since Deregulation*, a member of a Congressionally mandated National Research Council *Study of the Advanced Solid Rocket Quality and Test Program* and a member of a National Materials Advisory Board that wrote the report *Aging of U.S. Air Force Aircraft*.

In 1957 he was a member of the National Academy of Science Special Study Group which formulated a long-range plan for research and development of the United States Air Force. From 1970 to 1972, while on leave, Professor Mar served as Chief Scientist of the Air Force for which service he was awarded the Decoration for Exceptional Civilian Service. He received a second Decoration for Exceptional Civilian Service in 1981 for service on the Scientific Advisory Board of the U.S. Air Force. In 1979 he was a member of a special committee which advised the Administrator of the Federal Aviation Administration on issues related to the crash of the DC-10 at O'Hare Airport. He was a member of the Committee which, in 1980, wrote the report entitled "Improving Aircraft Safety" for the Secretary of the

Department of Transportation. He has served on a number of Committees, Panels and Boards including the National Collegiate Athletic Association Research Committee, the NASA Space Systems and Technology Advisory Committee, the National Awards Committee of the National Academy of Engineering, the Scientific Advisory Board of the U.S. Air Force, the Structures and Materials Panel of AGARD, the National Materials Advisory Board, the Aeronautics and Space Engineering Board, and the Aeronautics Advisory Council of NASA.

He was a member of advisory groups which helped in formulating solutions for the problems of airplanes such as the B-52, KC-135, DC-10, C-5A, F-15, and F-111. He was chairman of ad hoc Committees which addressed issues related to the development of the F-16, F-18, the B-1 and B-2 systems. Other advisory assignments include service on panels which examined the development of U.S. Navy and U.S. Air Force jet engines, the operations of the U.S. Air Force Logistic Command, the operations of the U.S. Military Airlift command and he was chairman of the panel which formulated a long range plan of research for the structural integrity of jet engines for the Lewis Research Center of NASA. In 1986 he was a member of an FAA review team which wrote a report addressing the structural integrity issues of geriatric aircraft. More recently, he was chairman of a committee reporting to the NASA Associate Administrator Office of Space Flight on the design of the graphite/epoxy filament wound solid rocket motor and was vice-chairman of the National Academy of Engineering Panel which provided oversight on the Redesign of the Space Shuttle Solid Rocket Booster.

In 1983, he gave the invited 24th SDM lecture of the combined societies of the AIAA, ASME, ASCE and AHS. In 1987, he was presented the Structures, Structural Dynamics and Materials Award by the AIAA for "...extraordinary contributions in research...outstanding leadership in research and development in the Air Force, NASA and the aerospace industry;...notable accomplishments in engineering education." In 1992 he was elected to the grade of Honorary Fellow in the American Institute of Aeronautics and Astronautics. He is a member of the National Academy of Engineering.